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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,687	07/14/2005	Richard David Saunders	UDL27.001APC	8588
20995 7590 12/16/2010 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER ZHANG, RACHEL L				
ART UNIT		PAPER NUMBER		
1721				
NOTIFICATION DATE		DELIVERY MODE		
12/16/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com

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# Office Action Summary

**Application No.**

10/539,687

**Applicant(s)**

SAUNDERS ET AL.

**Examiner**

Rachel L. Zhang

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-19, 22-30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/78556 (Dukler) in view of US Patent 4148968 (Nagashima).

Dukler discloses a method of printing on documents a visible or invisible image (page 3, paragraph 5), wherein the method includes a liquid toner (page 4, paragraph 1), which is used in a digital printing process (page 4, paragraph 5). The toner may produce multiple combinations of markers (page 6, paragraph 3). The labeling dyes may comprise rhodamine dyes as the luminescent material (page 5, paragraph 4 - page 6, paragraph 1). The dye may produce a halo superimposed with the original image (page 9, paragraph 2). Dukler fails to disclose a chemical reactant in the substrate.

Nagashima discloses an electrophotographic methods which comprises developing a latent image with a charged toner particle containing a color forming agent (A) to a image receiving sheet containing a color forming agent (B) and heating to cause a thermal color forming reaction between the color forming agents (column 3, lines 42-53). The color forming agent (B) may be a phenol polymer (column 2, lines 62-68). The

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toner may comprise a rhodamine dye (column 32, lines 65-67). The method may form a toner image which is completely fixed and can be obtained without any waiting time (column 2, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the chemical reaction of Nagashima for one of the image layers of Dukler so that the image is completely fixed and is obtained with no waiting time.

3. Claims 20, 21, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/78556 (Dukler) in view of US Patent 4148968 (Nagashima) as applied to claims 9 and 16 above, and further in view of US PGPub 2003/0068575 (Yanaka).

Dukler and Nagashima disclose the system of claims 9 and 16 as discussed above, wherein the dye may be a Rhodamine B (Dukler, page 5, paragraph 4 - page 6, paragraph 1), but fail to teach the use of the specific dyes. Yanaka discloses a toner which uses leuco dyes, which may be Rhodamine B or 3,3-bis(p-dimethylaminophenyl)-6-dimethylaminophthalide (PP 0013). It would have been obvious to one of ordinary skill in the art at the time of invention to use the 3,3-bis(p-dimethylaminophenyl)-6-dimethylaminophthalide of Yanaka for the Rhodamine B of Dukler and Nagashima because Yanaka teaches that they are functionally equivalent. The substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958). When a patent claims a

structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.

### ***Response to Arguments***

4. Applicant's arguments filed 10/04/2010 have been fully considered but they are not persuasive.

Applicant argues that Dukler fails to teach a liquid toner composition comprising a fine particulate toner dispersed in a liquid vehicle. Applicant states that Dukler only discloses a dry toner powder. The examiner respectfully disagrees. As stated above, page 4, paragraph 1 of Dukler teaches "the terms 'ink' and 'toner' are used interchangeable, for the sake of brevity, to indicate *any* kind of ink, *including liquid*" (emphasis added). One of ordinary skill in the art would be led to use a liquid toner in the invention of Dukler.

Applicant argues that Dukler does not disclose a security ingredient which is a reactant or a printable substrate with a complementary reactant. The examiner agrees. However, Dukler is not relied upon to meet the recited limitations.

Applicant argues that Nagashima is not suitable for use in a liquid toner printing process because in Nagashima after the color forming agents have been applied to the substrate, they must be heated, and would not be usable in a liquid toner printing process where the toner is allowed to cool. The examiner respectfully disagrees. Column 30, line 59 – column 31, line 7, of Nagashima disclose that the image may be

formed by use of a wet developer. Further, it is known in the art to use a heat-fixing method for a system comprising a liquid toner, as evidenced by US PGPub 2004/0109057 (Pan), in PP 0002. Therefore one of ordinary skill in the art would be enabled to use a liquid toner in the process of Nagashima.

Applicant argues that Nagashima does not disclose a method of producing an invisible image, and therefore Nagashima does not meet a primary requirement of Dukler. The examiner respectfully disagrees. Dukler teaches "that the labeling dyes must not interfere substantially with the printing or copying...this requirement is generally satisfied by fluorescent compounds." One of ordinary skill in the art would be led to use colored dyes or fluorescent dyes interchangeably. Alternatively, Dukler does disclose a visible image, and therefore Nagashima would meet at least one of the primary requirements of Dukler.

Applicant argues that Nagashima requires the use of a special substrate, and therefore does not meet another important requirement of Dukler. The examiner respectfully disagrees. Nagashima requires a special substrate in order so that image is completely fixed and is obtained with no waiting time. The special substrate is a recognized advantage of Nagashima, and therefore one of ordinary skill in the art would see the advantage of using the special substrate of Nagashima in the process of Dukler.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Zhang whose telephone number is (571)272-9802. The examiner can normally be reached on Mon-Fri: 8:30-5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher RoDee/  
Primary Examiner, Art Unit 1721

RLZ